

IN THE CLAIMS:

Claims 1-6 (cancelled).

7. (Cancelled)

8. (Currently Amended) An arrangement for introducing radiation energy into a workpiece made from a weakly absorbent material comprising:

~~a weakly absorbent material, with~~ a radiation source and a resonator unit, wherein the resonator unit comprises; a first resonator mirror and a second resonator mirror between which the workpiece is fixed;

a beam-shaping unit ~~according to claim 7 being~~ shaping a ring-shaped beam bundle which has a central radiationless area and arranged in front of the resonator unit and the first resonator mirror being located in ~~the~~ a radiationless central area behind ~~the~~ a first focus point;

a collecting lens being provided which surrounds the first resonator mirror and which focuses ~~the~~ an incident beam bundle in the workpiece in a second focus point;

said second resonator mirror being located in ~~a~~ the radiationless central area behind the second focus point and surrounded by a focusing mirror which shapes ~~the~~ a divergent beam bundle coming from the second focus point into a convergent beam bundle and reflects it onto a mirror that is arranged between the focusing mirror and the workpiece and reflects the beam bundle onto the second resonator mirror;

said mirror having a hole that is just large enough to allow the beam bundle coming from the second focus point and traveling in the direction of the focusing mirror to pass through without being influenced and through which the beam bundle reflected by the second resonator mirror passes without being influenced and being focused a second time inside the workpiece in a second focus point before subsequently striking the first resonator mirror and being reflected back by the first resonator mirror into the workpiece.

9. (Previously Presented) An arrangement according to claim 8, wherein the parameters of the second resonator mirror and of the focusing mirror are selected in such a way that, before striking the second resonator mirror, the beam bundle reflected by the focusing mirror is focused in a third focus point that is imaged in the second focus point by

the second resonator mirror, and in that the parameters of the first resonator mirror are selected in such a way that a beam bundle coming from the second focus point and impinging on the first resonator mirror is focused in the third focus point.

10. (Previously Presented) An arrangement according to claim 8 wherein the parameters of the second resonator mirror and of the focusing mirror are selected in such a way that the beam bundle reflected by the focusing mirror is focused in the second focus point selectively with or without intermediate focusing a second time after reflection at the second resonator mirror, a third time after reflection at the first resonator mirror, and a fourth time after a repeated reflection at the second resonator mirror, and a beam decoupling unit is arranged in front between the radiation source and the beam-shaping unit and prevents beam components from being coupled back to the radiation source.

11. (Previously Presented) An arrangement according to claim 9, wherein the radiation source emits linearly polarized light and the beam decoupling unit is formed by a polarizer and a quarter-wave plate.

12. (Previously Presented) An arrangement according to claim 8, wherein an additional radiation source is provided for generating a starting crack and the additional beam of this additional radiation source can be focused occasionally in the workpiece by a lens and a deflecting unit.

13. (New) An arrangement according to claim 8, wherein the beam shaping unit comprises:

a focusing lens followed by a first axicon which is arranged with the focusing lens on a common optical axis and whose conical optical surface faces the focusing lens;

a second axicon being arranged on the optical axis in front of the focusing lens with its conical optical surface remote of the focusing lens and the parameters of the focusing lens and of the axicons, and their distances from one another being selected in such a way that a beam bundle coming from a radiation source arranged on the optical axis in front of the

second axicon and passing through the beam-shaping unit is shaped into a ring-shaped beam bundle which is focused in a first focus point and which subsequently diverges and which has a central radiationless area.